

Amendments to the Claims

Please cancel Claims 1-80. Please add new Claims 81-122. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1-80. (Canceled)

81. (New) An article comprising:

a substrate having a surface; and

an adhesive composition supported by the surface of the substrate, wherein the adhesive composition comprises a PHA, the PHA being poly 3-hydroxybutyrate-co-4-hydroxybutyrate having a glass transition temperature from about -30 °C to about -5 °C.

82. (New) The article of Claim 81, wherein the adhesive composition forms a layer on the surface of the substrate.

83. (New) The article of Claim 82, wherein the layer has a thickness of at most about 300 microns.

84. (New) The article of Claim 81, further comprising a second substrate surface adhesively bonded to the surface of the article supporting the adhesive composition.

85. (New) The article of Claim 81, wherein the PHA has a glass transition temperature from about -25 °C to about -10 °C.

86. (New) The article of Claim 81, wherein the adhesive composition comprises multiple different PHAs.

87. (New) The article of Claim 86, wherein the adhesive composition comprises two different PHAs.

88. (New) The article of Claim 81, wherein the adhesive composition further comprises one or more solvents.

89. (New) The article of Claim 88, wherein the adhesive composition comprises at most about 90 weight percent solvent.
90. (New) The article of Claim 88, wherein the adhesive composition comprises at most about 80 weight percent solvent.
91. (New) The article of Claim 88, wherein the adhesive composition comprises at most about 75 weight percent solvent.
92. (New) The article of Claim 88, wherein the adhesive composition comprises at most about 50 weight percent solvent.
93. (New) The article of Claim 88, wherein the adhesive composition comprises at most about 35 weight percent solvent.
94. (New) The article of Claim 88, wherein the adhesive composition comprises at most about 1 weight percent solvent.
95. (New) The article of Claim 88, wherein the adhesive composition comprises an organic solvent.
96. (New) The article of Claim 95, wherein the organic solvent is selected from the group consisting of hexane, heptane, benzene, toluene, ether, methyl tert-butyl ether, ethyl acetate, butyl acetate, methylene chloride, chloroform, acetonitrile, methanol, ethanol, isopropanol, and 2,2,2-trifluoroethanol.
97. (New) The article of Claim 88, wherein the adhesive composition comprises an aqueous solvent.
98. (New) The article of Claim 88, wherein the adhesive composition comprises two or more solvents.
99. (New) The article of Claim 81, wherein the adhesive composition further comprises one or more adhesive additives.

100. (New) The article of Claim 99, wherein the adhesive composition comprises at most about 95 weight percent adhesive additives.
101. (New) The article of Claim 99, wherein the adhesive composition comprises at most about 50 weight percent adhesive additives.
102. (New) The article of Claim 99, wherein the adhesive composition comprises at most about 10 weight percent adhesive additives.
103. (New) The article of Claim 99, wherein the adhesive composition comprises at most about 1 weight percent adhesive additives.
104. (New) The article of Claim 99, wherein the adhesive additives are selected from the group consisting of tackifiers, cross-linking agents, initiators, colorants, waxes, stabilizers and plasticizers.
105. (New) The article of Claim 81, wherein the adhesive composition has an open time of at least 10 minutes.
106. (New) The article of Claim 81, wherein the adhesive composition has an open time of at least 100 minutes.
107. (New) The article of Claim 81, wherein the adhesive composition has an open time of at least 200 minutes.
108. (New) The article of Claim 81, wherein the adhesive composition has a surface tack time value of at most about 15 seconds.
109. (New) The article of Claim 81, wherein the adhesive composition has a surface tack time value of at most about 5 seconds.
110. (New) The article of Claim 81, wherein the adhesive composition has a surface tack time value of at most about 1 second.
111. (New) A method comprising:

applying a PHA solution to a substrate surface to form a layer of the PHA solution;

removing at least some of the solvent to form a PHA adhesive composition on the substrate surface;

wherein the PHA is a poly 3-hydroxybutyrate-co-4-hydroxybutyrate having a glass transition temperature from about -30 °C to about -5 °C.

112. (New) The method of Claim 111, wherein the layer has a thickness of at most about 300 microns.
113. (New) The method of Claim 111, wherein the solvent is removed by evaporation.
114. (New) The method of Claim 111, wherein the solvent is removed at a temperature at most about 40 °C.
115. (New) The method of Claim 111, further comprising contacting the substrate surface having the PHA adhesive composition thereon with a second substrate surface to form an adhesive bond with the second substrate surface.
116. (New) The method of Claim 115, wherein the second substrate surface is coated with the PHA adhesive composition before contacted with the substrate surface.
117. (New) The method of Claim 115, wherein the second substrate surface is not coated with the PHA adhesive composition before contacted with the substrate surface.
118. (New) The method of Claim 111, wherein the PHA has a glass transition temperature from about -25 °C to about -10 °C.
119. (New) A method comprising:
pressing a PHA between at least two surfaces to form a pressed PHA;

wherein the PHA is poly 3-hydroxybutyrate-co-4-hydroxybutyrate and the pressed PHA has a glass transition temperature from about -30 °C to about -10 °C.

120. (New) The method of Claim 119, wherein the PHA is pressed at a pressure of at most about 100 psig.
121. (New) The method of Claim 119, wherein the PHA is pressed at a temperature of at most about 150 °C.
122. (New) The method of Claim 119 wherein the surfaces are separated to expose the pressed PHA.